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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,308	09/25/2000	Philip Jeffrey Anthony	CEL1.0011	3511

7590 03/27/2003
Sherman & Sherman
Seventeenth Floor
2029 Century Park East
Los Angeles, CA 90067

EXAMINER

NI, SUHAN

ART UNIT	PAPER NUMBER
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2643

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DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SY

Office Action Summary

Application No.

09/669,308

Applicant(s)

ANTHONY ET AL.

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,12-13,21 and 22 is/are rejected.
- 7) ☒ Claim(s) 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the amendment filed 01/07/2003.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the newly added claim 21, the limitation of "... electric current to the coils generates a magnetic flux path ..." is indefinite, because the magnetic circuitry forms a magnetic flux path, not by a current.

Furthermore, such limitation is not clearly supported in specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-3, 7 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Fincham (US-5,548,657).

Regarding claim 1, Fincham disclose a compound loudspeaker drive unit, comprising: a first diaphragm (34) having an first coil (36) thereon; a second diaphragm (21) having a second coil (24) thereon formed on a periphery of the first diaphragm (Fig.); a first seat (19-20) having a first magnet structure (17) and defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat (28) having a second magnet structure (29) as claimed.

Regarding claims 2-3, 7 and 22, Fincham further disclose the compound loudspeaker drive unit, wherein both magnets are substantially disk shaped (Fig.) and made of neodymium iron boron magnets (abstract) as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham (US-5,548,657) in view of Paddock (US-5,604,815).

Regarding claims 5-6, Fincham does not clearly teach that the magnets can be magnetized after assembly as claimed. Paddock discloses a method of manufacturing a loudspeaker, including a step of magnetizing the magnet after assembly. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to magnetize the

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magnets after assembly the loudspeaker as an alternate choice, for reliably manufacturing loudspeakers.

5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham (US-5,548,657) in view of Kotsatos et al. (US-5,894,524). '

Regarding claims 12-13, Fincham does not clearly teach a ferrofluid as claimed. Kotsatos et al. discloses a high power tweeter, having a ferrofluid (50) in a magnetic gap. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a ferrofluid into the magnetic gap of the loudspeaker as an alternate choice, for reducing heat and increasing output power.

Allowable Subject Matter

6. Claims 15-20 are allowed.

7. Claims 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

8. Applicant's arguments dated 01/07/2003 have been fully considered, but some of them are not deemed to be persuasive.

The cited reference (US-5,548,657) does clearly show a compound loudspeaker drive unit, comprising: a first diaphragm (34) having an first coil (36) thereon; a second diaphragm (21) having a second coil (24) thereon formed on a periphery of the first diaphragm (Fig.); a first seat (19-20) having a first magnet structure (17) and defining an annular opening to allow said

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second coil to be moveably suspended therein; and a second seat (28) having a second magnet structure (29) as claimed.

Based on the figure and specification, the prior art clearly teach that the loudspeaker is a high frequency transducer (please see abstract) and the second coil (24) is formed on a periphery of the first diaphragm.

A magnet (17) is coupled to a seat structure (19-20) for forming an air gap for the voice coil (24) as claimed.

Furthermore, because of the existence of annular gap between seat (28) and magnet (29), the diaphragm (27) with a voice coil located in the gap can be functionally operated.

Regarding claims 5-6 and 12-13, the applicants argue no motivation to combine the references. It is not necessary that the references actually suggest, expressly or in so many words the changes or improvements that applicants have made. The test for combining references is what the references as whole would have suggested to one of ordinary skilled in the art. **In re Sheckler, 168 USPQ 716 (CCPA 1971); In re Mlaughlin 170 USPQ 209 (CCPA 1971); In re Young 159 USPQ 715 (CCPA 1968).**

Conclusion

9. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY

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EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

10. Any response to this final action should be mailed to:

**Commissioner of Patents and Trademarks
Washington, D.C. 20231**

Or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE"), or

(703) 305-9508, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

**Receptionist, Sixth Floor,
Crystal Park II,
2121 Crystal Drive,
Arlington, Virginia 22202**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

SN

03/22/2003


**CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000**